GOVERNMENT OF MONGOLIA

Economic Policy Support Project
Energy Sector Commercialization and Privatization Program

Task 1.2

Report on Recommendations for Reform of The Mongolian Power Sector

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INTRODUCTION

This report was prepared for Development Alternatives, Inc. as part of the USAID-funded Energy Sector Commercialization and Privatization Program. The Energy Program is part of the larger Economic Policy Support Program of the Government of Mongolia.

This report is the second report on this subject and follows the Inception Report delivered to the Government in the last week of June, 1998. The Inception Report described the results of a preliminary investigation of the energy sector undertaken by International Resources Group, Ltd. and included an analysis of the present status of the sector along with the scope and direction of recommended reforms. It is highly recommended that the Inception Report be studied carefully since it described important institutional reforms going far beyond the structural reforms discussed in this report.

EXISTING SECTOR STRUCTURE

Mongolia is a country of 1.6 million square kilometers with a population of just under 2.5 million. There are three main divisions of the energy sector: the Central Energy System (CES) situated in the north central region of Mongolia: the Eastern System, composed of three aimags; and the Western System, composed of three aimags. The CES is by far the largest and comprises four distribution companies, five electric generating plants and numerous heating-only plants. The CES is a fully integrated, state-owned electric system which also provides heat and hot water for consumers and process steam for industry**.** In contrast, the systems in the east and west of Mongolia are quite small depending largely on small diesel generating sets for electricity and small coal-fired boilers for heat. The large disparity among the three systems strongly suggests that any restructuring plan must differentiate among the systems. It is not desirable, nor possible, to effect restructuring identically on the three systems.

RESTRUCTURING OPTIONS

The consulting team evaluated a large number of potential options applicable to the Mongolian energy sector. These options have emerged from the experiences of many other countries which have engaged in sector restructuring exercises during the past 5-10 years. These include: the United Kingdom, Argentina, Columbia, Pakistan, India, Jordan and New Zealand, among others. There is a large diversity in the scope and depth of the restructuring which took place in these countries, ranging from complete privatization through the sale of assets to less drastic steps of simple commercial reorganization to improve operational efficiency. There is also a large range in the size of these countries' energy sector and great differences in the prevailing sophistication of technical commercial operations.

The relatively small size of the Mongolian Energy Sector suggests that the radical structural change in Mongolia embarked upon by other countries may not be appropriate. However, drastic remedies are needed. Mongolia is in crisis and major reform must occur immediately. In larger systems, it is

commonplace to recommend that the sector be disaggregated into functional components, i.e., generation, transmission and distribution, and subsequently converted into corporate entities. This restructuring process is philosophically appealing and can result in significant efficiency gains to the sector when the size of the functional components is large. It is the opinion of the consultant team, however, that these conditions are not presently prevalent in Mongolia and that other options should be considered.

The consultants have developed the following options for the Government to consider to improve its energy sector. Concomitant with all the options discussed below is the requirement for some form of autonomous, regulatory body to oversee the sector both during and subsequent to the completion of the restructuring exercise. After the restructuring options are presented, a recommended approach to the formulation of a regulatory regime is discussed.

OPTION 1. Privatization of Sector

There are a number of examples where governments have decided to privatize its energy sector immediately through the direct sale of the assets to private companies e.g., Argentina. However, in that case, the Argentine Government did not sell the assets of the entire sector to one bidder but broke up its sector into smaller components and divested each one through separate international bidding processes. At the present time the Argentine Government has divested all its direct ownership in electric facilities with significant improvements in efficiency and system reliability along with reductions in the cost of energy.

There is a large market for the purchase of state-owned energy sector enterprises (as established by AES interest in Mongolia) and it is likely that the Government of Mongolia would attract significant interest if an international tender were put forward. In many respects, this approach is the most efficient and easiest method by which to restructure the sector but the Government must take precautions to ensure that the process is fair and transparent. This can be accomplished through the establishment of a international competitive bidding process with a well-publicized Energy Sector Policy Statement from the Government identifying the conditions for the transaction. The Government must be sensitive to public/political concern that it has sold the government's patrimony at a cost below its perceived value. This concern can be ameliorated through the utilization of a public relations campaign identifying the need for and the benefits to be realized from the privatization. However, if tariffs are likely to be raised as a result of the sale, this can create significant political problems down the road.

It should be recognized that a proposed sale of the existing assets of the sector can encounter some practical difficulties. One of these is the determination of the "value" of the assets. Some critics of the process may suggest that the correct value should be based on a re-valuation of the assets to reflect current costs. This argument can be countered by the view that since subsequent tariff levels will be based on the acquiring price of the assets, the lower price will result in lower tariffs. On the other hand, owing to the relatively poor condition of the sector's assets, the Government should not expect to receive a high price when sold. It appears that the best price will be achieved through a competitive bidding process and not through a negotiated contract with a single party. However, given the critical situation Mongolia confronts, a negotiated sale should not be ruled out. To protect itself against charges that it sold the assets too cheaply, the Government should invest in retaining the services of world-class economic, financial, legal and technical advisors to assist it in its negotiations.

There are two reasons why it is particularly important to establish a regulatory process prior to the sale to third parties: 1) the purchaser needs to be assured that he will be treated fairly and objectively as he conducts the business of operating the sector; and 2) the consumers need to protected from the potential that the monopoly provider may extract prices in excess of costs. Moving towards direct privatization of the sector through sale of assets in the absence of effective independent regulation runs the risk that a private monopoly replaces a public one.

OPTION 2. Corporatization of Fully-Integrated Sector

The existing structure comprises an integrated state-owned entity operating under the auspices of the Energy Authority which is within the Ministry of Infrastructure and Development of the Government of Mongolia. While the Authority attempts to operate on a commercial basis, it is subject to significant involvement by the Government in its day-to-day activities. One approach to minimize this political involvement is to remove the sector from a direct relationship with a Government Ministry.

This can be accomplished by restructuring the sector into a state-owned corporate enterprise operating independently of the Government but subject to the implementation of Government policy through Government ownership and membership on the Board of Directors. The Government can incorporate private sector input through membership on the Board of individuals representing the private sector as well as those with interest in larger public issues such as the welfare of under-privileged members of society. Once the corporation is established, it should be a simple matter to privatize the sector gradually through sale of Government-owned shares or through the issuance of new shares for public purchase.

While the existing sector entities operate with some degree of autonomy, in order for the sector to function in a corporate environment, additional steps are required. The corporation should establish functioning profit centers at as many entities as possible. Each commercial profit center should have responsibility for managing its activities subject to overall policy objectives of the Government operating through its ownership and membership on the Board. Entities not directly related to the production/transmission/distribution and sale of energy should be spun off to the private sector.

Improving commercial operations, rather than immediately relinquishing government ownership, is the most palpable option to political opponents and to existing staffs employed in the sector. The Government, as owner, can maintain existing labor policies thus ensuring no immediate staff retrenchment or reduction in benefits. There must be some incentives to improve efficiency, reliability and quality of service but this can occur only if the Government establishes these as management objectives and gives the management the authority to act and rewards or penalizes management, depending on the success of their efforts. If the Government continues to involve itself politically in the sector, it is unlikely that significant improvement will occur despite the change in structure. It is noted that the coal mining industry in Mongolia is structured along similar lines with the Government retaining majority ownership and control but with minority owners responsible for the operation of the mines.

OPTION 3. Creation of Generating Company and/or Heating Company

This option could be a progressive step from Option 1, or Option 1 could be skipped, and Option 2 could be adopted in one step. This option involves the establishment of a Power Generating Company, composed of the five existing thermal power stations and the heating-only thermal plants. Alternatively, if deemed technically possible the heating-only plants could be spun off into a separate company. The Company(ies) would be established as state-owned company(ies) and would

enter into power (or heating) sales contracts with the remaining functional transmission/distribution units.

In most countries where the consultants have been involved it has been recognized that the power generation function need not be a part of the transmission and distribution functions. In fact, it has become commonplace during the restructuring process to establish separate generating companies to supply consumers through existing T&D facilities.

The remaining T&D functions (which are combined in the present structure) can remain as government institutions or be corporatized as a state-owned company. In this case it is important that individual business units, i.e., each distribution entity and a separate transmission entity, be identified as profit centers so that the Government is in a position to establish separate companies for each if such were deemed desirable in the future. Alternatively and preferably, these separate T&D companies should be privatized with strong regulatory oversight from the independent regulatory body.

With regard to the Generating Company, it will be important to minimize the Government's day-to-day involvement in the Company. This result can be achieved by developing by-laws and a corporate charter which enshrine the independence of the Company from undue Government influence. While the Government of Mongolia would retain a majority stake in the Company (at least initially), the Board of Directors should have private sector representation with the Government's share holdings reduced over time. The Government could initially appoint a majority of the Board's members and then the Board itself could choose additional members from the private or public sector.

This vertical disaggregation and corporatization of the generation facilities can pave the way for future private sector involvement in generation. The future capacity needs of the Mongolian Power Sector could be met by the newly-created Generating Company or by Independent Power Producers (IPPs). The supplier of choice would be the one which could supply the most cost-competitive source of electricity to consumers. As noted earlier, the transmission function of the remaining T&D entity would be responsible for soliciting competitive bids and negotiating contracts for the supply of energy to its distribution customers. Mechanisms, however, need to be put into place to insure that IPPs are not placed at a competitive disadvantage vis-à-vis the corporatized generation company. This can only be done through effective regulation.

An important consideration in this option is that the new Generating Company is responsible for raising the funds required for upgrading and renovating the existing generation facilities where economically and technically feasible. If the older facilities were not cost-competitive with newer plants, whether owned by the Generating Company or an IPP, then the older plants should be retired and resources committed to other activities. A separate Generating Company, if properly capitalized and efficiently managed, should be able to raise the funds necessary for expansion of new facilities or renovation of existing facilities, thereby reducing the financial burden on the Government.

As noted, it is vital that a regulatory mechanism be established as the sector restructuring activities progress. While an appropriate regulatory regime is important to protect consumers from monopolistic pricing practices, an independent authority is necessary to assure potential investors that they will be shown fair treatment and that political influences will be minimized. Experience garnered from around the world demonstrates that investors insist on some form of autonomous regulation before they are willing to commit large scale investments in the energy sector.

OPTION 4. Full Disaggregation and Corporatization

This option entails full separation of the energy sector into its functional entities. The restructured sector would be composed of a separate Generating Company as envisaged in Option 2, a separate transmission entity and separate distribution companies. The Generating Company can be gradually privatized through the Government divesting its majority stake to public or private investors. While a wide diversity of ownership may seem desirable, it is important that there be some large investor which has experience in power generation.

The transmission entity can be retained as a Government entity, either as a fully-owned state company or as a part of an Government Ministry. The transmission function serves the responsibilities of power purchaser from the Generating Company and/or IPPs and transmitter and power supplier to the separate distribution companies. This organization would also be responsible for dispatch of power from the various sources and control of the transmission grid. It is critical for the development of IPPs that the transmission entity creates a level playing field for the IPPs. The transmission entity must treat prospective IPPs in the same manner as it treats power supply from the new Generating Company. If there is a perception that the incumbent Generation Company is given favored treatment in contractual arrangements or that its plants are dispatched without regard to short-run marginal generating costs, it is unlikely that IPPs will make significant investments in Mongolia.

The potential for dispute between the transmission company and suppliers of power highlights the need for a regulatory organization for dispute resolution with enforcement and investigative powers to address these issues.

The transmission entity will have to negotiate supply contracts with the distribution companies for the supply of bulk power. For the foreseeable future the distribution companies will be captive customers of the transmission company. As the sector evolves to higher levels of technical and commercial sophistication it will be possible to allow individual distribution companies to contract directly with generating companies for power supply. In this circumstance the distribution company will be required to contract with the transmission company for transmission services to have its contracted power supply delivered. For the immediate future the benefits that may be achieved from this further restructuring may not be warranted by the additional costs or required technical sophistication.

This option involves the creation of separate state-owned distribution companies which can be privatized eventually through divestment of Government shares. The CES is currently composed of four distribution entities, the largest of which is Ulaan Bataar, which serves approximately 67% of the consumers in the CES. However, owing to the large industrial complex in Erdenet, the revenue collected in Ulaan Bataar is only 33% of total CES revenue. Consideration may be given to dividing the Ulaan Bataar distribution company into two or more smaller companies before embarking on the corporatization process. While there may be no compelling reason for such a step, creating distribution companies of similar size may be easier to sell politically.

There are other ways to introduce private participation into distribution which do not involve selling the Government's shares or directly divesting the assets. Some countries have leased distribution facilities to private sector parties with the control of the assets returning to the Government at the end of the lease period. This approach can lead to private sector investment in the sector and the introduction of private sector managerial experience while the government is not required to relinquish title to the assets. It may also be possible for the Government to retain ownership and possession of the facilities but to hire a management company to operate the facilities in return for a fixed fee or a percentage of the operating savings that may result from improved management.

A refinement could also be that individual distribution consumers are allowed to shop for their electricity from other distribution companies using their incumbent distribution company as the delivery agent for the purchase. A number of countries, including Great Britain, have embarked down this path but the results to this point appear to be inconclusive.

Comments on Options

Of the four options discussed in this report, Option 1 is the most radical but implementation of the direct sale of the power sector will achieve privatization benefits in the shortest time possible. However, as noted, the downside of achieving early benefits are that the sales price realized may not reflect the value to the Mongolian Government because of the poor condition of the facilities. Prospective purchasers will likely discount the value of the facilities with the expectation that they will have to make major investments in the sector to improve operational efficiency. Nevertheless, a direct sale of the sector would yield very early benefits particularly if one of the conditions of the sales contract required the purchaser to make investments in improving efficiency and supply and voltage reliability to consumers. It must be reiterated that it is critically important in a direct sale transaction that a regulatory mechanism be put in place prior to the consumption of the transaction. The other three options presented for the Central Electric System represent a progression of relatively increasing levels of change in the sector. It would certainly take longer to achieve privatization benefits if the Government chose to start at Option 2 and progress to Option 4 over a period of years. One of the advantages of this progressive path is that it allows the Government to stop anywhere along the restructuring pathway if conditions warrant. It is also possible for the Government to determine at the beginning that it favors one of the three options and to move immediately to that option and avoid the progressive prior steps.

Regulatory Mechanism

While a discussion of regulatory alternatives is not included in the scope of this task, some preliminary thoughts regarding the regulatory regime may be helpful while the restructuring options are under review. A regulatory framework will be most important if the Government chooses to privatize the sector through a quick sale because consumers have no protection from the potential for pricing by otherwise predatory monopolist. In the second option and those that follow, as long as the Government has sole-ownership of the sector, the need for independent, quasi-judicial regulation may not be as imperative. However, if the Government chooses to privatize the sector gradually it will need simultaneously to create a mechanism both to protect consumers and to assure investors that they will be treated fairly. A second reason for implementing regulation early is that potentially unpopular tariff decisions by the Government can be laid at the door of the regulator and not be blamed on the elected public officials.

SUMMARY

On balance, given the crisis confronting the Mongolian Energy Sector, the consulting team believes that if the current negotiations with AES could move forward bringing important new technology and investment into the sector then selling the entire system to AES could represent an excellent approach for restructuring the sector. However, such an “accelerated” arrangement mandates that a regulatory regime be put in place immediately and that AES or any other investor be made aware that it will be subject to regulatory oversight and in no way “grandfathered.”

If these negotiations do not proceed, then the consultants recommend that the generation stations (as a unit) be corporatized as a unit and sold to the private sector through an internationally competitive tender. Simultaneously, the transmission assets "(including those high voltage lines held by the distribution entities) should be consolidated into a corporatized government-owned transmission company. This company in turn should issue a tender for a management contract with a pre-selected shortlist of internationally-recognized utility companies.

The distribution entities should be consolidated into two companies, corporatized and privatized with effective regulation on an accelerated basis.

Finally, an independent regulatory regime, with appropriate financial and technical assistance from the international donor community should be established on a timely basis but in no case later than December 31, 1998.